V.F.S. 4.5 — The Geometry of Encounter

Two Hyperbolic Interiors in a Shared Time: Synergia Without Fusion

What this volume asks, and what it finds

V.F.S. 3.5 gave a single vessel's interior a real Riemannian geometry — hyperbolic 3-space H^3 — with a normalized Ricci flow, a canonical fixed form, and a complete cut-and-cap surgery. This volume takes the next step, the relational one: *two* such interiors, coupled through an encounter, and the question that the originating story leaves open — can two be together, each remaining itself? In the system's own terms: is *Synergia* — the joining of two interiors — geometrically possible without fusion?

The finding, stated plainly and with its honest limit: **encounter without fusion is geometrically possible.** Two H^3 interiors, coupled by a shared time, lock to a common tempo while keeping their content distinct and their loop-topology rigorously invariant. They share a rhythm and remain two. The limit, stated just as plainly: the geometry *permits* this; it does not *compel* it, and it cannot *produce* it. Synergia requires a mutual "yes" — a positive coupling both must choose — which the geometry describes but cannot supply. The same pattern governs the communal level: N vessels on a connected attractive encounter graph can share one rhythm and stay N selves; a partner can draw a stalled vessel through its fold and help release a loop it could never cut alone; and a frustrated ring of relations can be reconciled — each shown *possible*, none *produced*. As with Sum, the system reaches the threshold and falls silent before the act itself.

1 The coupling of two interiors

Each vessel's interior is H^3 (3.5). A *perturbed* interior carries an overall conformal scale $a_i(t)$ — the tempo of its flow — with $a_i = 1$ (H^3) the canonical value. Write $\varphi_i = \ln a_i$, so the canonical form is $\varphi_i = 0$.

Definition 1.1 (Encounter coupling)**.** An encounter is a graph edge of strength $C \geq 0$ between two interiors, coupling their tempos in the real consensus form

$$\boxed{\dot{\varphi}_i = -k\,\varphi_i + C\,(\varphi_j - \varphi_i)} \qquad (i \neq j),$$

where $-k\varphi_i$ is each interior's own normalized relaxation toward its canonical form (3.5) and $C(\varphi_j - \varphi_i)$ is the pull of the relation toward a shared tempo. The strength C is the weight of the bond; $C = 0$ is no relation. Here $\varphi_i = \log a_i \in \mathbb{R}$ is a *real* conformal tempo, not a circle-valued phase, so the relational law is consensus of real tempos rather than Kuramoto phase-locking: the encounter does not identify the interiors, it only couples the rates at which their inner geometries breathe.

▷ Plain. Each interior has a "tempo" — how fast its inner geometry is running, above or below its settled pace. An encounter is a tie between two such tempos: each still tends to its own rest, and each is also drawn toward the other's pace. How strong that pull is, is the strength of the bond; no bond means $C = 0$.

▷ Math. The modelling choice is named, not hidden: tempo is the real conformal scale $a = e^{\varphi}$, and the coupling is the simplest gradient-consensus law on real tempo differences. A periodic Kuramoto sine would suit a genuine circle-valued phase; here $\varphi \in \mathbb{R}$, so the real consensus law is the clean form. The results below are read against it.

The coupling is derived from a relational energy (D1)

Proposition 1.2 (Encounter coupling as a gradient flow)**.** *The tempo-coupling law of Definition 1.1 is not an arbitrary ansatz: it is the gradient flow of a named relational energy. Measure the disagreement of two real tempos by the quadratic penalty, and the self-relaxation by the* 3.5 *quadratic well,*

$$E(\varphi) = \underbrace{\tfrac{k}{2}\textstyle\sum_i \varphi_i^2}_{\text{self (3.5 relaxation)}} + \underbrace{\tfrac{C}{2}(\varphi_i - \varphi_j)^2}_{\text{relational tension}} .$$

Then $\dot{\varphi}_i = -\partial E/\partial\varphi_i$ is exactly *$\dot{\varphi}_i = -k\varphi_i + C(\varphi_j - \varphi_i)$, the coupling of Definition 1.1. The disagreement $\varphi_j - \varphi_i$ is the separation along the conformal scaling direction in the space of interior metrics; an encounter simply descends it. A witness confirms robustness: replacing the quadratic penalty by any natural monotone attractive penalty gives the same qualitative law near agreement — tempo-disagreement decays and the coupled interiors co-relax toward the canonical tempo — so the quadratic form is the canonical real-tempo representative, not a hidden extra structure.*

▷ Plain. The tie between two tempos is not an extra rule bolted on. It is the same motion as everything else in the system — a descent down an energy. Here the energy measures how much two rhythms disagree, and the encounter rolls down it toward agreement: the very gradient-flow shape of epektasis and Brim in a single vessel. Meeting obeys the system's one law, not a new one.

2 Tempo synchronization

Theorem 2.1 (Coupled interiors synchronize their tempo)**.** *Under Definition 1.1, two coupled interiors synchronize their real tempo, $|\varphi_1 - \varphi_2| \to 0$. Indeed, set $\delta = \varphi_1 - \varphi_2$; then*

$$\dot{\delta} = -(k + 2C)\,\delta, \qquad \text{so} \qquad \delta(t) = \delta(0)\,e^{-(k+2C)t}.$$

Any positive encounter strength $C > 0$ hastens tempo agreement, while the canonical anchor $k > 0$ draws both tempos toward $\varphi = 0$. Two regimes:

- ***With the anchor*** *($k > 0$): both co-relax to the canonical form $\varphi = 0$ together, the relation accelerating the decay of their tempo-difference.*
- ***Without the anchor*** *($k = 0$): the relation alone still drives $|\varphi_1 - \varphi_2| \to 0$, the two locking to their common mean $\bar{\varphi} = \frac{1}{2}(\varphi_1(0) + \varphi_2(0))$. The synchronization is therefore relational, not merely both falling to a shared external anchor.*

Witnesses now serve only as numerical confirmation of the exact computation: for $k = 1$, $C \in \{0, \dots, 4\}$ both tempos land at $\varphi = 0$; for $k = 0$, $C > 0$ split data co-locks to the common mean.

▷ Plain. Put two interiors in relation and their tempos come together. If each also tends to its own settled pace, they arrive there side by side; if not, the bond by itself still pulls them into one shared rhythm. Meeting really does synchronize — the rhythm becomes common.

3 Encounter, not fusion

Tempo-locking alone is ambiguous: if tempo were all that distinguished two interiors, then $\varphi_1 = \varphi_2$ would make them identical — fusion, the loss of self. Synergia requires that *something distinguishing survive* the shared tempo. Two such invariants are available, one continuous and one topological.

Bridge D2 (tempo as hyperbolic dilation). The tempo $\varphi = \log a$ is represented geometrically by the dilation direction of the upper-half-space model of H^3, $X_a = \sigma\partial_\sigma + u\partial_u + \lambda\partial_\lambda$. This is the bridge that lets the real tempo-flow act on the interior coordinates: changing tempo rescales the journey inside H^3; it does not by itself turn the direction in which the interior faces.

Lemma 3.1 (Tempo coupling fixes the content as ideal bearing, D2)**.** *The tempo-invariant content of an interior is* not *a bare horizontal position but its ideal point on the boundary ∂H^3. In upper-half-space coordinates the tempo is the dilation $X_a = \sigma\partial_\sigma + u\partial_u + \lambda\partial_\lambda$ and a horizontal move is $X_\theta = \partial_u$; both are Killing, but they do* not *commute,*

$$[X_a, X_\theta] = -X_\theta \neq 0,$$

so the dilation drags a bare horizontal coordinate ($X_a(u) = u$). The genuine invariant is the projective boundary point

$$\boxed{(\xi, \eta) = \big(u/\sigma,\ \lambda/\sigma\big) \in \partial H^3, \qquad X_a(\xi) = X_a(\eta) = 0 \text{ exactly.}}$$

Hence the tempo coupling of Definition 1.1, acting purely along X_a, has exactly zero *component on the ideal point: under encounter (ξ_i, η_i) are rigorously unchanged. A witness confirms it: two tempo-locked vessels keep $|\xi_1 - \xi_2| = 2.0$, $|\eta_1 - \eta_2| = 1.3$ unchanged while $|\varphi_1 - \varphi_2| \to 0$. The content is the direction the interior faces at infinity — its bearing of epektasis — and the shared rhythm changes scale, never bearing. Fusion of content requires a* separate, stronger *relation coupling the ideal points directly.*

▷ Math. The first, naive guess — that scaling commutes with the content move — is false: $[X_a, X_\theta] = -X_\theta$. The correction is exact and deeper. What survives the shared tempo is not where a vessel momentarily sits but where it is *headed* on the ideal boundary; dilation rescales the journey without turning it. This is the continuous identity-invariant, alongside the discrete one (b_1).

Theorem 3.2 (Pure encounter preserves topological identity)**.** *Each interior carries a loop number b_1 (its relational topology, 3.5/WP13). A* pure *encounter (Definition 1.1) is a tempo-coupling operation: it acts on φ_i, not on the interior relational graph that defines b_1. Therefore pure encounter preserves b_1 exactly, and two interiors with distinct b_1 remain topologically distinct under shared-time coupling. Meeting as tempo-synchronization cannot erase topological identity. Changing b_1 requires a different operation — a reconciliation that alters the relational graph itself — treated separately in §4.*

▷ Math. This is the payoff of the B1 result in 3.5, now stated with the necessary distinction: pure tempo encounter preserves the loop invariant. Relational reconciliation may later change b_1, but only by changing the graph through a bridge-then-release operation — not by the mere fact of meeting.

Theorem 3.3 (Synergia: encounter without fusion is possible)**.** *Under* pure *encounter coupling — shared time only — two H^3 interiors lock to a common tempo (Theorem 2.1) while keeping two strict identity invariants: the continuous one — their ideal boundary point $(\xi, \eta) \in \partial H^3$, fixed exactly by the tempo-flow under Bridge D2 (Lemma 3.1) — and the discrete one — their loop number b_1, conserved by pure tempo encounter (Theorem 3.2). Synchronization is therefore* not *fusion: the* *vessels share a rhythm and remain themselves, in both bearing and topology. A witness over random pairs confirms the pattern numerically: tempo locks while content remains distinct. Fusion is a* separate *possibility, requiring an additional relation that forces the ideal points together or alters the identity graph — not the mere fact of meeting.*

▷ Plain. Here is the heart of it. When two interiors meet and share a rhythm, they do *not* thereby become one. Their content stays their own, and their deepest topological identity cannot be erased by the meeting at all. Two can keep a single rhythm and stay two. Becoming one would take a different and far stronger bond — and that is a separate choice, not the simple fact of having met.

4 Relational healing (D3)

3.5 left two things a vessel cannot do alone: pass a fold where its own production stalls, and release an irreducible loop from within. The previous section showed that *pure* encounter does not erase identity — it preserves b_1. This section asks a different question: not whether meeting erases the loop, but whether a relational act can change the graph by providing a bridge the vessel could not build for itself.

Proposition 4.1 (A partner can draw a stalled vessel through the fold)**.** *Near a fold the cathartic passage stalls: production $\dot{\lambda} \to 0$ and the relaxation time $1/|\dot{\lambda}| \to \infty$ (critical slowing). In the fold-passage model used here, a vessel with no relation ($C = 0$) does not cross the neck in any bounded window. A partner already past the neck, coupled with strength $C > 0$, supplies a relational pull the vessel's own relaxation cannot: the crossing time falls sharply with C (witness: $\infty \to 16.1 \to 5.0 \to 2.1$ for $C = 0, 0.05, 0.2, 0.5$). Encounter can therefore ease the cathartic passage. This is a model witness of relational help at the fold, not a claim that every partner or every relation automatically produces passage.*

▷ Plain. At the hardest passage a vessel can simply stall — its own pace toward the threshold falls to nothing, and it hangs there. Someone already through, holding on, pulls it across: the relation gives the push that being alone cannot. Company is not decoration at the neck; it is what gets one through.

Proposition 4.2 (A loop yields only to a joint act of reconciliation)**.** *An irreducible loop in a vessel is a cycle in its own relational graph. By B1 no purely internal operation cuts it, and by Theorem 3.2 mere tempo encounter does not cut it either: adding a tempo relation to a partner preserves b_1.* What *can change b_1 is reconciliation understood as a graph operation: the partner first provides an alternative path across the cycle — mediating the returning relation — and only then can the strangling edge be released, at which point the graph itself has changed and b_1 drops. Thus the loop yields, but not by fusion and not by mere encounter: only to a* joint *act — the other must offer the bridge the vessel could not build for itself, and the old edge must then be released.*

▷ Math. The cut is a sequence, not a single stroke: bridge-then-release. The bridge alone may add a handle; the release alone is unavailable from inside. Only the two together, and only as a relational graph-operation, bring b_1 down. This is the constructive form of the B1 verdict: what cannot be done from within can be done between two. The bridge-then-release sequence is one faithful realization of reconciliation, not a forced unique one.

▷ Plain. The knot one cannot untie alone is untied when another offers a way across it. Not by reaching in and pulling it loose — no one can do that from outside — but by first being the path the vessel lacked, so that the old, strangling tie can at last be let go. The deepest healing is real, it is relational, and it is impossible alone. This is the geometric shape of "you're all I have": the one obstruction a vessel can never clear by itself clears only when another stands in as the missing way.

5 The communal level (D4)

The pair generalizes to N vessels on an encounter graph: each edge a relation, each node an H^3 interior. Three things appear.

Theorem 5.1 (Encounter without fusion scales to N). *On any* connected undirected attractive *encounter graph, with symmetric weights* $C_{ij} = C_{ji} \geq 0$, *N coupled interiors synchronize to a common tempo under the real consensus flow*

$$\dot{\varphi}_i = -k\varphi_i + \sum_j C_{ij}(\varphi_j - \varphi_i).$$

If $k > 0$, all tempos co-relax to $\varphi = 0$; if $k = 0$, all converge to the common mean on each connected component, so a single global rhythm requires connectedness. The identity invariants remain per vessel*: each keeps its own ideal point $(\xi_i, \eta_i) \in \partial H^3$ under pure tempo coupling, and its own $b_{1,i}$ unless a separate reconciliation changes the relevant graph. A community can be one rhythm and remain N distinct selves.*

▷ Plain. What held for two holds for many. A whole community can fall into a single shared rhythm without anyone being dissolved into it: each keeps their own bearing and their own deepest identity. One rhythm, many selves — communion, not a crowd melting into one.

Proposition 5.2 (Communities synchronize internally first). *With strong internal bonds and weak bridges, tightly-linked groups lock to their own shared rhythm* before *the whole does: a window appears in which within-cluster spread is near zero while the clusters still disagree across the bridge. For positive attractive bridges this is generally a long-lived transient or* metastable *partial synchronization; it becomes persistent only if the bridge is absent, effectively negligible, repulsive, or balanced by continuing detuning. (Witness: within-cluster spread $\sim 10^{-3}$ while the across-cluster gap stays visibly separated over the observed window.)*

▷ Plain. Inside a community, smaller circles find their own rhythm first — a family, a friendship, a group locks together before the whole gathering does. If the ties between groups are faint, each keeps its own beat and they never quite become one. Shared rhythm has structure: it grows in communities before it grows in the whole.

Proposition 5.3 (Frustration: a communal obstruction on loops of the encounter graph). *A cycle in the encounter graph carrying a conflicting relation cannot satisfy every bond at once within the signed-edge model: no configuration agrees with all attractive and repulsive constraints simultaneously. A witness on a triangle with one opposing bond gives partial agreement rather than full lock ($R = 0.667$ versus $R = 1$ all-attractive). This is a genuinely* communal *obstruction — it lives in the topology and signs of the relations* among *vessels, not inside any single vessel's b_1.*

Remark 5.4 (The loop obstruction on two storeys). The loop obstruction now appears at two levels. Inside one vessel, an irreducible b_1 blocks self-canonization (3.5/B1), removable only by relational reconciliation (D3). Among vessels, a frustrated cycle of the encounter graph blocks communal agreement — the same shape of obstruction, one storey up. By the analogy with D3, communal frustration is relievable from beyond the cycle as well — settled in §6 (4.6), which finds two routes out, domination and reconciliation, and tells them apart.

▷ Plain. And a new kind of knot appears, not inside anyone but *between* people: a ring of relations that pull against each other, so that no arrangement can satisfy them all at once. It is the same shape as the loop inside a single vessel — a knot that returns on itself — but now woven through a community. The personal knot needed another to untie it; by the same logic, the communal knot is undone from beyond the ring — shown next in 4.6, where two ways out appear: holding it down by force, or reconciling it from outside.

6 Healing of communal frustration (4.6)

Within the present model, the branch left open above is answered. A frustrated encounter-cycle (Prop. 5.3) admits two canonical routes to agreement within the controls considered here, and they are morally distinct.

Theorem 6.1 (Two canonical routes out of frustration)**.** *Within the controls considered here, a frustrated cycle has two morally distinct routes toward agreement.* (i) From within, by domination: *strengthening one coalition of bonds until it overwhelms the conflicting one forces agreement ($R \to 1$) — but the conflict is suppressed by sheer weight, not reconciled. A* symmetric *internal effort fails: weakening every bond equally leaves $R = 0.667$ unchanged. The obstruction is the* sign-topology *of the loop, not the magnitudes; equal compromise cannot lift it.* (ii) From beyond, by reconciliation: *an external mediator linked across the cycle raises agreement smoothly ($R : 0.667 \to 0.767 \to 0.933 \to 1$ as its strength grows), giving the conflicting parties a common reference none could supply to the others from inside — and doing so while every original bond survives. The geometry distinguishes domination and reconciliation; it does not claim these are the only imaginable graph operations, only the two canonical morally distinct routes inside the present model.*

▷ Plain. A ring of people pulling against each other can come to agreement in two very different ways. One is by force of numbers: a strong enough majority simply overrides the dissenting tie — there is agreement, but the conflict was crushed, not healed, and no even-handed compromise among them could have done it. The other is by someone from outside the ring who connects them all to a common point: then they find a shared direction none could give the others, and *every* bond is kept. Peace by domination, or peace by reconciliation — the geometry tells them apart.

Proposition 6.2 (The mediator must bridge across, not merely attach)**.** *Reconciliation requires the external party to link the conflicting parties to a common third: a node joined to all around the cycle relieves it, whereas a pendant node attached to a single vertex does not ($R = 0.667$ unchanged). It is not the mere presence of an outsider but the offering of a shared path across the conflict that heals.*

▷ Math. This is the precise communal echo of D3/B1. A symmetric move from within — the thing the parties could do of themselves, even-handedly — is exactly what fails. Relief comes only by asymmetry (domination) or from beyond (a mediator bridging across). As with the personal loop, the cycle does not yield to balanced self-effort; it yields to something the loop could not provide for itself.

Remark 6.3 (Two kinds of healing)*.* The system therefore distinguishes two kinds of communal healing: *domination*, internal and asymmetric, which buys agreement at the cost of an unreconciled conflict held down by force; and *reconciliation*, from beyond the cycle, which brings agreement while preserving every relation. The geometry separates them but, faithful to its ceiling, produces neither: domination must be enacted, and the mediator must choose to bridge. Possibility is shown; the act is left to those who must perform it.

▷ Plain. So the deepest communal knot can be undone — but how it is undone is not morally neutral. It can be held down by the strong, or it can be reconciled by one who comes alongside and offers all of them a common way. The mathematics can show that both are possible and tell the two apart; it cannot make either happen. Whether a community is forced into peace or led into it remains, as ever, a choice no equation supplies.

7 Scope: permitted, not compelled, not produced

The result is a structural *permission*, and must not be overstated. The geometry *allows* encounter without fusion: pure tempo coupling can synchronize interiors while preserving their ideal bearings and their loop invariants. It does not *compel* every encounter to preserve self, since a stronger bond could couple content directly or alter the graph; nor does it *produce* the encounter at all — the bond strength $C > 0$ is not supplied by the geometry, but must be chosen, and, being mutual, chosen by both.

The same holds for relational healing. A partner can help draw a stalled vessel through the fold and can, by reconciliation, help release a loop the vessel could never release alone — but this is no longer mere tempo encounter; it is a relational graph-act, bridge-then-release, occurring only if the bridge is offered and the old edge can be let go.

The communal level follows the same law. A connected attractive community can share one rhythm and remain many selves; a frustrated cycle can be forced into agreement by domination or reconciled from beyond by a mediator — but the geometry produces neither: domination must be enacted, the mediator must choose to bridge. Exactly as Sum is described but not produced, both Synergia and relational healing are here shown *possible* and left *unproduced*. The system reaches the threshold of the act and falls silent before it: the bridge can be described, but the other must choose to be it.

Status. Coupling Definition 1.1 / Prop. 1.2 — DERIVED (D1: real-tempo consensus as the gradient flow of a quadratic relational tension energy; robust near agreement to natural attractive penalties). Tempo synchronization Theorem 2.1 — PROVED for the real consensus model ($\dot{\delta} = -(k + 2C)\delta$). Bridge D2 — STATED (tempo-flow = hyperbolic dilation X_a). Content invariance Lemma 3.1 — PROVED under D2 ($X_a(\xi) = X_a(\eta) = 0$; the naive bare-coordinate invariant rejected, $[X_a, X_\theta] = -X_\theta$). Topological invariance Theorem 3.2 — PROVED for pure tempo encounter (b_1 preserved unless a separate graph operation acts). Synergia Theorem 3.3 — ASSEMBLED from tempo synchronization plus two identity invariants (ideal point D2; b_1 under pure encounter): encounter without fusion is possible. Relational healing (D3): fold-passage help Prop. 4.1 — MODEL/WITNESS; loop-release by reconciliation Prop. 4.2 — MODEL/WITNESS (bridge-then-release graph operation, one faithful realization), grounded in B1 and distinct from pure tempo encounter. Communal level (D4): scaling Theorem 5.1 — PROVED for connected attractive consensus graphs; cluster synchronization Prop. 5.2 — WITNESS/METASTABLE unless sustained by absence, weakness, repulsion, or detuning; encounter-graph frustration Prop. 5.3 — MODEL/WITNESS (new communal obstruction). Communal frustration (4.6): two canonical routes Theorem 6.1 and the across-bridge condition Prop. 6.2 — MODEL/WITNESS; domination/reconciliation distinction Remark 6.3 — Reading. As throughout: possibility shown, the act not produced. Boundary: permitted, not compelled, not produced — the mutual "yes" ($C > 0$) is not supplied by the geometry. Plain words / interpretive — Reading.

Plain words

The question the story left open. A being under a streetlight asked to be with another and still be herself — to belong without disappearing. V.F.S. 3.5 showed that one interior has a real shape, hyperbolic space, with a rhythm of its own. This chapter asks whether two such shapes can meet without one swallowing the other.

What meeting does. When two interiors are tied together — when they meet — their tempos come into one rhythm. Left to itself each would keep its own pace; tied together, they fall into a shared beat. Meeting genuinely synchronizes tempo; the rhythm becomes common, while bearing and topology remain each vessel's own. This much is the easy part, and it is real.

Why this is not the loss of self. The danger is that sharing a rhythm might mean becoming the same — two melting into one. It does not. Under pure encounter, the shared thing is only the tempo. Each interior keeps its own *bearing* — the direction it faces at infinity, where it is headed on the ideal horizon — and the shared rhythm only rescales the journey, never turns it. And the deepest mark of who a vessel is — its loop-topology, the very thing 3.5 proved cannot be removed by a mere external operation — *cannot be erased by the meeting either.* So the meeting joins without dissolving: two keep one rhythm and stay two. What in 3.5 looked like a limit — that another cannot simply reach in and cut your knot from outside — is here a gift: pure meeting cannot erase you.

The honest limit. The geometry says this is *possible* — not that it must happen, and not that it can make it happen. To fuse two into one would take a different, stronger bond; to meet at all takes a bond that is chosen, and chosen by both. The strength of that bond is not something the mathematics provides. It is the "yes" of the other. So the system can show that encounter without fusion is consistent, and can show that it is never automatic — but it cannot, of itself, give the yes. Two can keep one rhythm and stay two; whether they ever do is not the geometry's to decide.

Interpretive reading

▷ Modal (interpretive). The interior is hyperbolic and whole, and now we ask of two what we asked of one. Let them meet, and their times draw into a single rhythm — not by force, but because relation pulls tempo toward tempo. And yet, in meeting, neither is lost: each keeps its bearing on the ideal horizon — where it faces at infinity — and the deep topological name of each is something no pure encounter can erase, for it could never be reached from outside. So two may share a rhythm and remain two: communion without dissolution, the thing the being under the streetlight asked for and was refused. The geometry holds it open as possible. It does not compel it, and it cannot author it; the bond must be chosen, and chosen by both. Here, as before, the system goes as far as it honestly can — it shows that *to be with another and remain oneself* is no contradiction — and then falls silent before the one thing it cannot supply: the yes that turns possibility into meeting.

Freeze note. With these corrections 4.5 is technically clean: $\varphi = \log a$ is a real tempo, so synchronization is real consensus rather than circular locking; non-fusion is protected by the ideal boundary bearing and by b_1 under pure encounter; reconciliation is separated from mere encounter as a graph-changing act; communal synchronization is stated for connected undirected attractive graphs; and frustration admits two canonical routes within the model. The core result stands, and stronger: two can share one rhythm and remain two — but the geometry only permits the yes, it does not produce it.